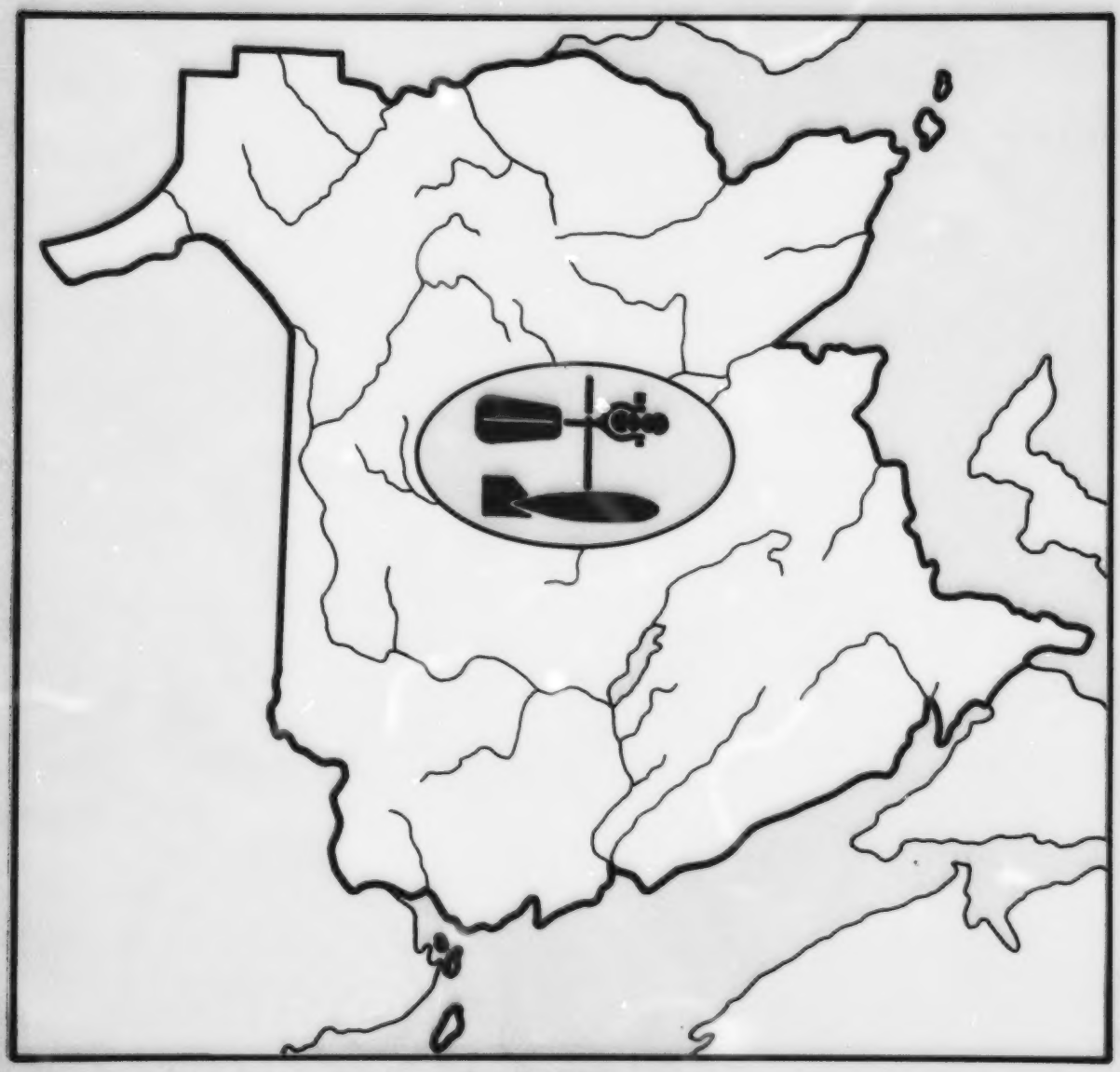
New Brunswick
Hydrometric Network Evaluation

Supplemental Report:
The Existing Network



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Environment Canada Environnement Canada

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Ministère des Affaires Municipales et de L'Environnement du Nouveau-Brunswick

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

SUPPLEMENTAL REPORT:
THE EXISTING NETWORK

A REPORT PREPARED BY

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ABSTRACT

This report, supplemental to the Principal Report of the New Brunswick Hydrometric Network Evaluation, outlines the characteristics of the existing hydrometric network. The 85 active stations in New Brunswick are identified in tabular and graphical form to show that the existing network is made up of many multi-purpose stations. A plate containing each drainage index sub-sub-division with the active stations plotted and a table of some brief station information is given for each of the 26 divisions in New Brunswick.

RESUME

Ce rapport, qui est supplémentaire au rapport principal de l'évaluation du réseau hydrométrique du Nouveau-Brunswick décrit les charactéristiques du présent réseau hydrométrique. Les 85 stations actives du Nouveau-Brunswick sont présentées sous formes tabulaires et graphiques pour indiquer que le présent réseau est composé de stations servant à plusiers objectifs. Une planche, qui contient chaque sous-sous-division hydrologique avec le site des stations actives de même qu'une table avec quelques renseignements sur les stations, est incluse pour chacune des 26 divisions du Nouveau-Brunswick.

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NOTE: The following drainage index sub-sub-divisions do not have active stations at this time:

01BA
01BB
01BM
01BN

1.0 INTRODUCTION

The hydrometric network in the Province of New Brunswick at the time of the 2 year evaluation, beginning in April 1986, was made up of stations supporting many differing long-term and short-term user needs. In the evaluation of the total hydrometric network, the interplay among the stations was clarified through a series of sub-networks or groupings. For example, certain stations are primarily for determining regional hydrology, while other stations are primarily in support of the Saint John River Forecast Centre.

This report summarizes the network prior to the evaluation. The information contained in this report was considered useful but not brought together in the other reports done for the project. For example, the number of stations on natural flow rivers is compared to the number on regulated flow rivers. Also, at the end of this report, a station by station inventory of selected characteristics is presented in plates using the Water Survey of Canada Division Drainage Index sub-sub-divisions.

The history of the growth of the hydrometric network in New Brunswick is graphically represented in Figure 1.1. The first station, gauging water entering New Brunswick, was established in July 1903 on the Fish River near Fort Kent. The station was installed by the United States Geological Survey on the American side of the border. The first station in New Brunswick was put on the Lepreau River in 1916 but it was not until 1918 that a base network started to develop. This network fluctuated between 12 and 22 stations according to their often single purpose needs until around 1956 when a steady rise in the number of stations was witnessed. This expansion levelled in the mid 1970's but by the end of the decade some of these discharge measurement stations were discontinued or converted to water level stations. The existing network as of December 31, 1987 totalled 85 stations. The operational differences of the network stations and the major equipment at each station operated by Water Survey of Canada are outlined in Table 1.1.

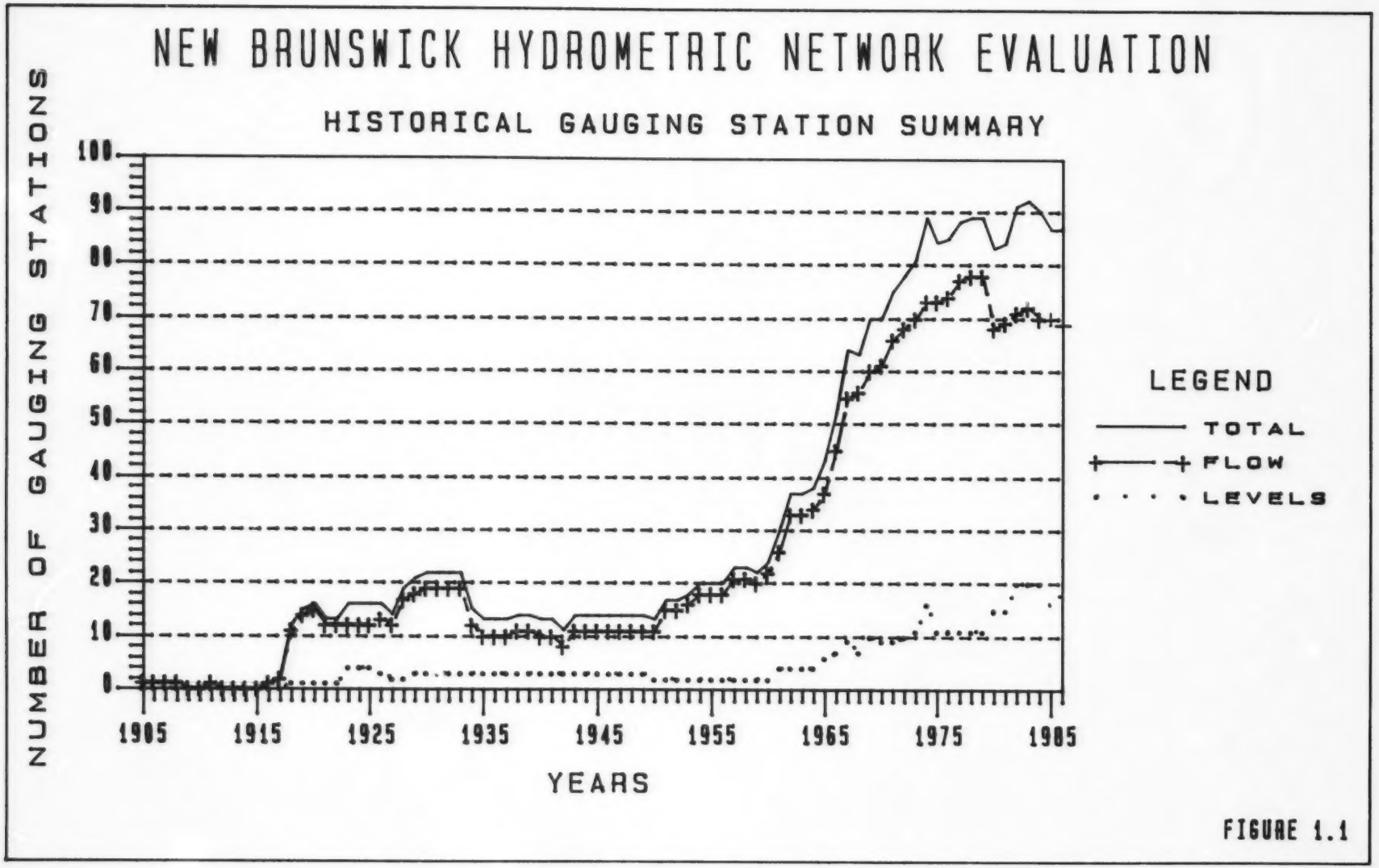
NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION
HISTORICAL GAUGING STATION SUMMARY
NUMBER OF GAUGING STATIONS
100
90
80
70
60
50
40
30
20
10
0
1905
1915
1925
1935
1945
1955
1965
1975
1985
YEARS
LEGEND
TOTAL
FLOW
LEVELS

FIGURE 1.1

TABLE 1.1

GAUGING STATION INVENTORY
OF THE
NEW BRUNSWICK HYDROMETRIC NETWORK
(as of December 31,1987)

Operation	Number of Stations
Equipment (Operated by Water Survey of Canada)	
Data Collection Platforms (DCP) 1	8
Telemarks (Telephone Communications) 1	30
Recording Gauges 1	76
Cableways	22
Sediment Sampling Stations	6
International Stations	5
Flow stations operated by WSC	66
Water level stations operated by WSC	17
Data Contributed by Other Agencies 2	2
Total Active Stations	85

NOTES:
1 DCP's and Telemarks are additional equipment added to recording gauges.
2 This does not include the data provided by the USGS at international stations.

2.0 NETWORK CHARACTERISTICS

2.1 INTRODUCTION

The network, in terms of the types of data published from each station, is shown in Figure 2.1. While all stations record water level some do not or can not have stage-discharge relationships developed to produce a discharge record, therefore, they are classified as "water level only" stations. Those with a stage-discharge relationship are classed as discharge stations. In the current network, the majority of stations, 69 (81%), are operated to produce discharge data while the remainder, 16 (19%), produce only water level data.

The streams on which the hydrometric gauge is located may be classified according to the interference by man on the flow characteristics. Influences created by dams or diversions cause the flows to be modified and thus the station is classified as being on a "regulated" river. Those not significantly affected are designated as "natural" regime flow streams. Figure 2.2 shows that 31, or over one third of the stations, are on regulated flow streams.

2.2 OPERATIONAL CATEGORIES

The hydrometric stations can also be classified according to the equipment at each station and the operation or daily use of the station data. Figure 2.3 shows the number of Water Survey of Canada Division operated stations providing real time data. Stations with data collection platforms (DCPs) transmit their data via satellite to a ground receiving station. Stations equipped with telemarks can be interrogated by telephone. While all DCP stations have recorders, the 44 stations designated as "recorder only" in Figure 2.3 have only a recorder and can not provide remotely sensed real time data. Overall, 48% of the stations in New Brunswick can be accessed remotely or automatically transmit the water level data.

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

DISCHARGE AND WATER LEVEL STATIONS

NUMBER OF STATIONS

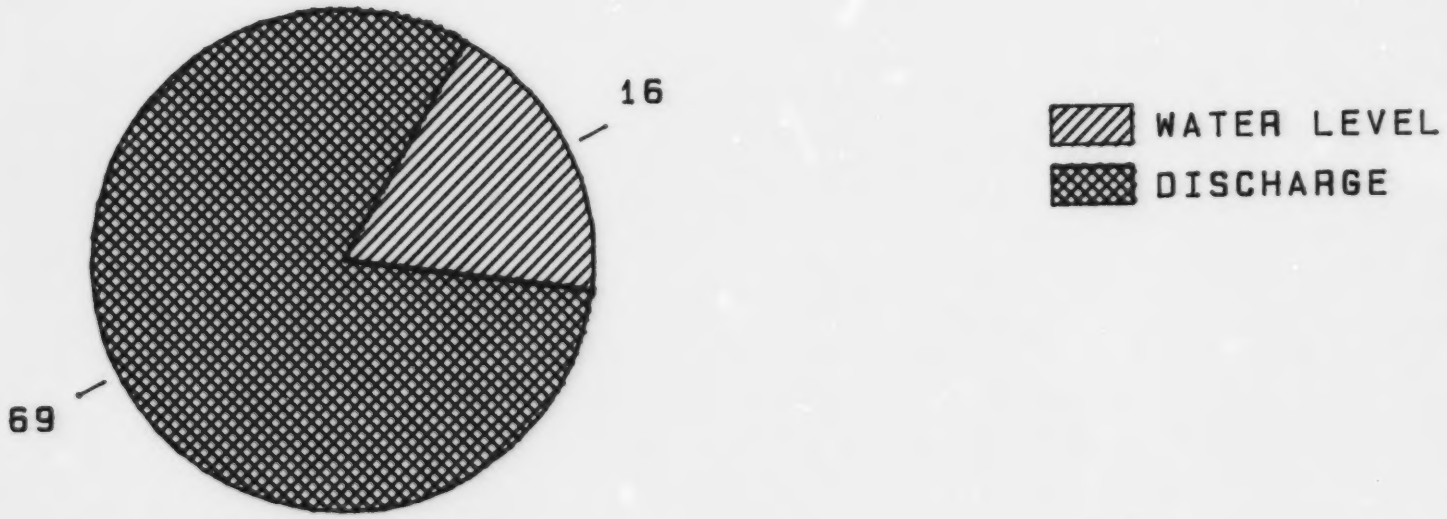

FIGURE 2.1

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

NATURAL FLOW AND REGULATED STREAMS
NUMBER OF STATIONS

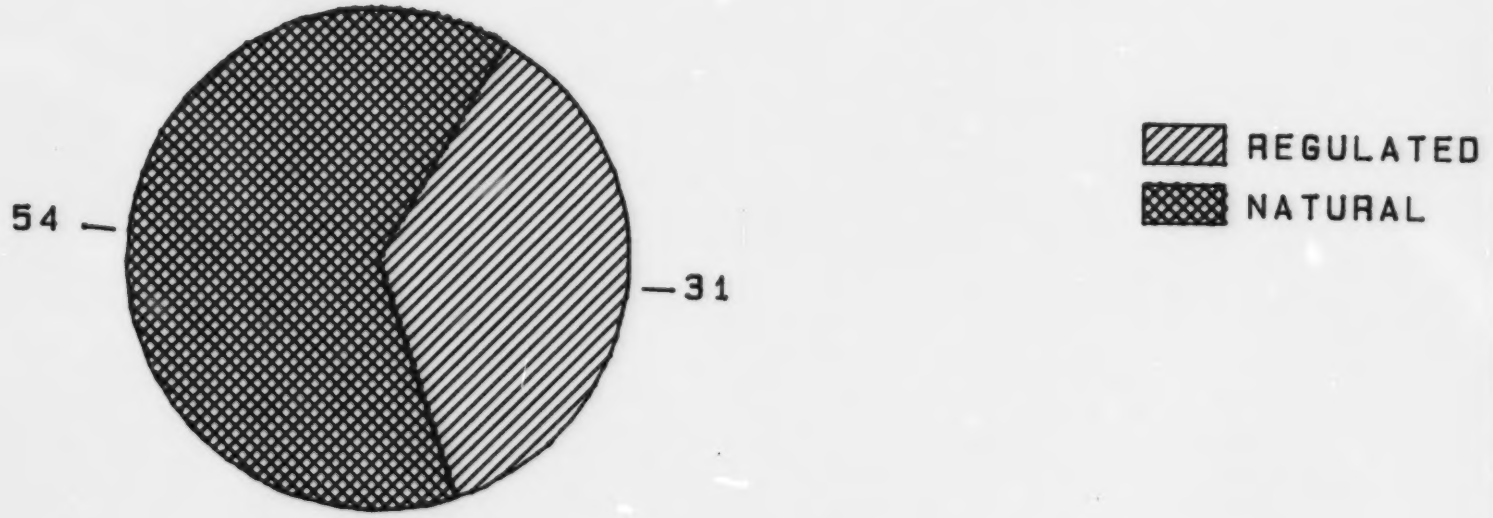

FIGURE 2.2

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

REAL TIME DATA NETWORK

NUMBER OF STATIONS

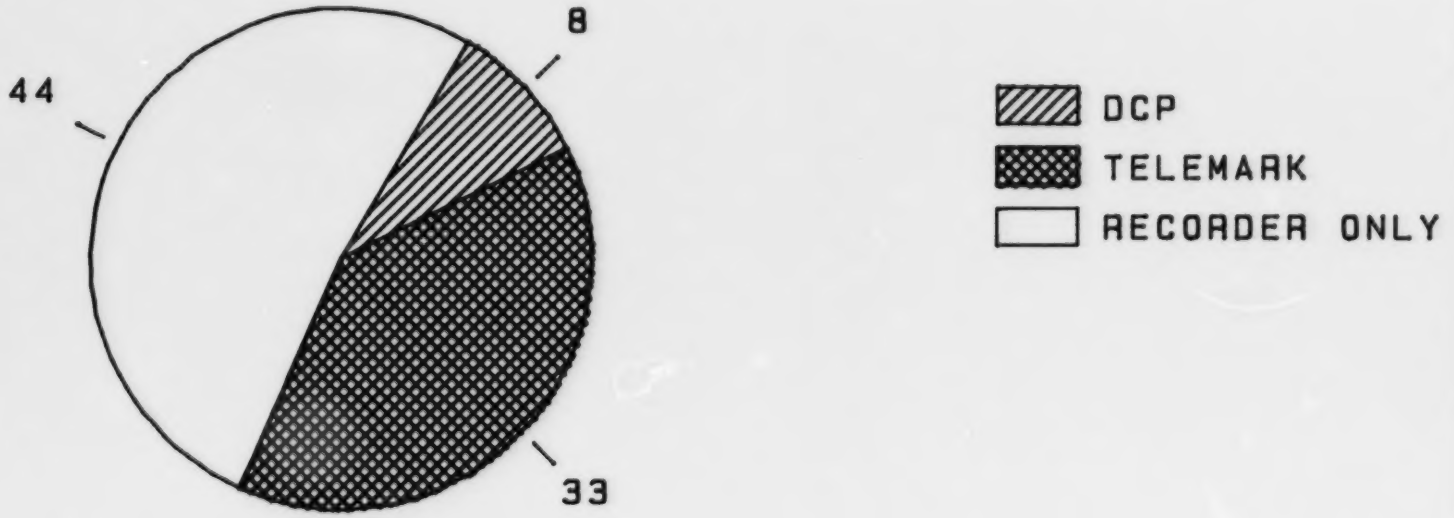

FIGURE 2.3

2.3 FINANCIAL RESPONSIBILITY CLASSIFICATIONS

The hydrometric network is cost-shared between the Government of Canada and the Government of New Brunswick. There are different classifications used to determine the share of the cost according to the respective interests of each party in the network station. Under the present agreements, Federal stations are entirely funded by the Government of Canada. Likewise, Provincial stations are funded by the Province of New Brunswick, while Federal-Provincial stations are 50-50 cost-shared. Stations designated as "others" are contributed from other sources. Overall, the Federal contribution is about 66% while the Province is paying for about 32% of the network costs. The remaining 2% of the classification originates from donated or contributed data (see Figure 2.4).

A more detailed breakdown of the network by responsibility classification is shown in Figure 2.5. This reflects breakdown within the Federal, Provincial and Federal-Provincial categories. These classifications are briefly defined in Table 2.1. From Figure 2.5, it can be seen that 26 (31%) of the stations are classified as serving the Regional Water Quantity Inventory. The next highest group, 17 (20%), are operated for National Water Quantity Inventory reasons. The stations designated for International Rivers and for Federal Department Programs represent 18% and 15%, respectively of the network. These four categories respresent 84% of the network of 85 stations.

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

FINANCIAL RESPONSIBILITY

NUMBER OF STATIONS

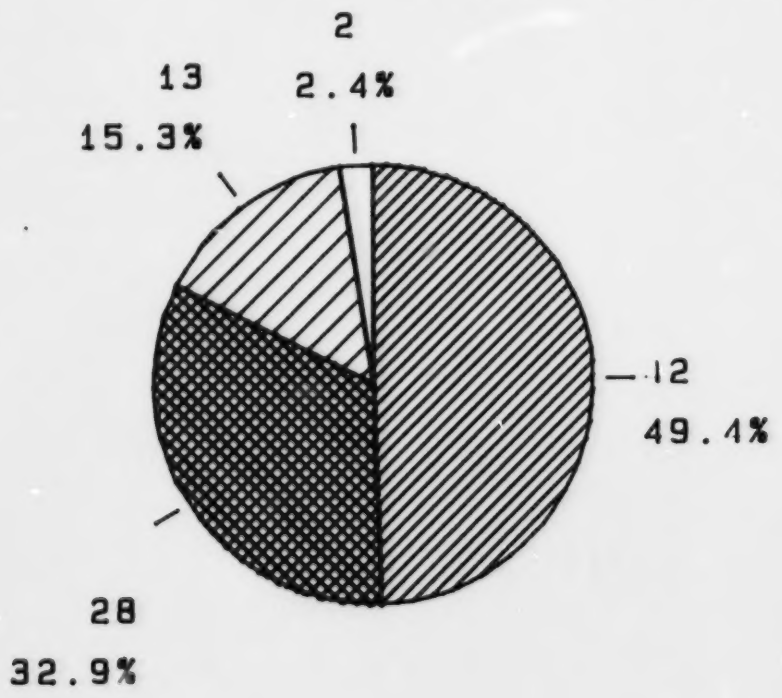

FIGURE 2.4

TABLE 2.1

FINANCIAL RESPONSIBILITY CLASSIFICATION CODES

Classification	Definition
Federal 1(F1)	Federal Department Programs
Federal 2(F2)	Interprovincial Rivers
Federal 3(F3)	International Rivers
Federal 4(F4)	National Water Quantity Inventory
Federal-Provincial 1(FP1)	Federal Provincial Agreements
Federal-Provincial 2(FP2)	River Basin Management
Federal-Provincial 3(FP3)	Regional Water Quantity Inventory
Provincial 1(P1)	Provincial Department Programs
Provincial 2(P2)	Specific Purpose Monitoring Requirements
Other(O)	Other

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

FINANCIAL CLASSIFICATION

NUMBER OF STATIONS

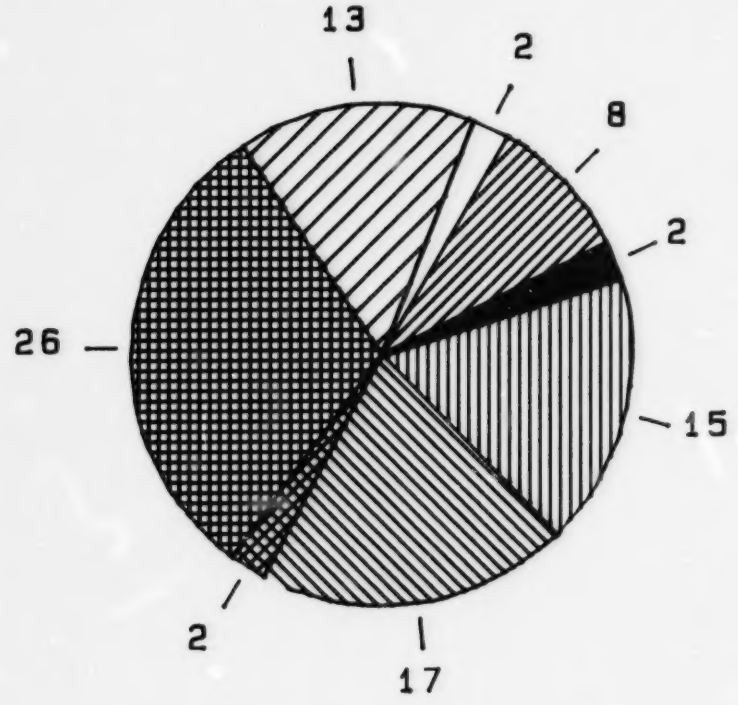

FIGURE 2.5

3.0 STATION CHARACTERISTICS BY DRAINAGE INDEX SUB-SUB-DIVISION

The gauging stations of the hydrometric network in New Brunswick are identified according to the national drainage index system: divisions, sub-divisions and sub-sub-divisions. For example, a hydrometric station with the number 01AD002 is located in the 01 division, the 01A sub-division and 01AD sub-sub-division. The last 3 digits (002) indicate the sequence number of its establishment within the sub-sub-division.

Tables 3.1, 3.2 and 3.3 tabulate the network divided in terms of the Active Regulated Flow Stations, Active Water Level Stations and Active Natural Flow Stations. This is given as a cross reference aid and a source for the complete names of the stations.

Figure 3.1 shows the delineation of the Province into the drainage index sub-sub-divisions. Following Figure 3.1 are 26 plates containing individual sub-sub-division maps with the location of each active hydrometric gauge. A table is also presented on each plate itemizing the period of record to 1986, the drainage area above the gauge, the financial responsibility classification, whether the stream is natural [N] or regulated [R], whether the gauge measures discharge [Q] or water level [WL] and the mean annual runoff expressed in a depth of millimetres. Four sub-sub-divisions, 01BA, 01BB, 01BM, and 01BN, are not shown as they do not have an active station at this time.

TABLE 3.1

ACTIVE REGULATED FLOW STATIONS IN NEW BRUNSWICK

STATION NUMBER	DRAINAGE AREA (km^2)	MEAN ANNUAL FLOW (m^3/s)	RESP. CLASS (1)	PERIOD OF RECORD (2) 60 65 70 75 80 86	STATION NAME
01AF002	21900	418	F3	<----------	SAINT JOHN RIVER AT GRAND FALLS
01AF003	1150	26.8	F2	----------	GREEN RIVER NEAR RIVIERE-VERTE
01AG003	6060	125	F3	----------	AROOSTOOK RIVER NEAR TINKER
01AH002	2230	48.0	P2	<----------	TOBIQUE RIVER AT RILEY BROOK
01AH003	3130	66.6	P2	<----------	TOBIQUE RIVER AT PLASTER ROCK
01AH004	4330	86.8	OTHER	<----------	TOBIQUE RIVER AT NARROWS
01AJ001	34200	668	F4	<----------	SAINT JOHN RIVER NEAR EAST FLORENCEVILLE
01AK004	39900	849	F4	----------	SAINT JOHN RIVER BELOW MACTAQUAC
01AQ002	1420	34.2	F4	<----------	MAGAGUADAVIC RIVER AT ELMCROFT
01AR004	1080	20.8	F3	<----------	ST. CROIX RIVER AT VANCEBORO
01AR005	3550	83.3	F3	<----------	ST. CROIX RIVER AT BARING
01AR011	357	7.18	F3	----------	FOREST CITY STREAM BELOW FOREST CITY DAM
01BJ009	60.8	1.29	P2	-------	WALKER BROOK AT CAMPBELLTON
01BK003	1840	36.2	OTHER	<----------	NEPISIGUIT RIVER AT NEPISIGUIT FALLS

(1) SEE TABLE 2.1 EXPLANATION OF CODE
(2) INDICATES THE YEARS DURING WHICH THE STATION HAS OPERATED BETWEEN 1960 AND 1986
A '<' INDICATES DATA ARE ALSO AVAILABLE PRIOR TO 1960

TABLE 3.2

ACTIVE WATER LEVEL STATIONS IN NEW BRUNSWICK

STATION NUMBER	RESP. CLASS. (1)	FLOW CLASS. (2)	PERIOD OF RECORD (3) 60 65 70 75 80 86	STATION NAME
01AD004	F3	N	----------	SAINT JOHN RIVER AT EDMUNSTON
01AF008	F1	R	-	SAINT JOHN RIVER AT THE FALLS AT GRAND FALLS
01AJ008	FP2	R	----------	SAINT JOHN RIVER AT HARTLAND SALMON POOL
01AJ009	F1	R	----------	SAINT JOHN RIVER AT SIMONDS
01AK003	F4	R	<----------	SAINT JOHN RIVER AT FREDERICTON
01AK009	P2	R	-------	SAINT JOHN RIVER AT MACTAQUAC GENERATING STATION
01A0002	P2	R	----------	SAINT JOHN RIVER AT MAUGERVILLE
01A0003	P2	R	----------	GRAND LAKE AT NEWCASTLE CREEK
01A0004	F1	R	----------	JEMSEG RIVER AT JEMSEG
01A0010	P2	R	-------	FRENCH LAKE AT LAKEVILLE CORNER
01AP003	F1	R	<----------	SAINT JOHN RIVER AT OAK POINT
01AP005	F1	R	----------	SAINT JOHN RIVER AT SAINT JOHN
01AQ007	P2	R	---------	MAGAGUADAVIC LAKE NEAR UPPER MAGAGUADAVIC
01AQ009	P2	R	--	LAKE UTOPIA AT CANAL
01AR009	F3	R	----------	GRAND LAKE AT FOREST CITY
01AR010	F3	R	----------	SPEDNIC LAKE AT ST. CROIX
01AR013	F3	R	-------	GRAND FALLS FLOWAGE AT GRAND FALLS

(1) SEE TABLE 2.1 EXPLANATION OF CODE
(2) 'R' INDICATES THAT FLOWS AND LEVELS ARE REGULATED, WHILE 'N' INDICATES NATURAL FLOW
(3) INDICATES THE YEARS DURING WHICH THE STATION HAS OPERATED BETWEEN 1960 AND 1986
A '<' INDICATES DATA ARE ALSO AVAILABLE PRIOR TO 1960

TABLE 3.3

ACTIVE NATURAL FLOW STATIONS IN NEW BRUNSWICK

STATION NUMBER	DRAINAGE AREA (km^2)	MEAN ANNUAL FLOW (m^3/s)	RESP. CLASS (1)	PERIOD OF RECORD (2) 60 65 70 75 80 86	STATION NAME
01AD002	14700	277	F3	<----------	SAINT JOHN RIVER AT FORT KENT
01AD003	1350	25.6	F3	<----------	ST. FRANCIS R. @ OUTLET OF GLASIER LAKE
01AE001	2260	49.9	F3	<----------	FISH RIVER NEAR FORT KENT
01AF007	339	7.71	FP3	----------	GRANDE RIVIERE AT VIOLETTE BRIDGE
01AG002	199	3.89	F3	----------	LIMESTONE RIVER AT FOUR FALLS
01AH005	230	4.55	FP3	----------	MAMOZEKEL RIVER NEAR CAMPBELL RIVER
01AJ003	1210	26.5	F3	----------	MEDUXNEKEAG RIVER NEAR BELLEVILLE
01AJ004	484	10.3	F3	----------	BIG PRESQUE ISLE STREAM AT TRACEY MILLS
01AJ010	350	7.96	FP3	----------	BECAGUIMEC STREAM AT COLDSTREAM
01AJ011	156	3.42	FP3	----------	COLD STREAM AT COLDSTREAM
01AK001	234	5.06	FP3	<----------	SHOGOMOC STREAM NEAR TRANS CANADA HWY
01AK005	26.9	.560	FP3	----------	MID.BR. NASHWAAKSIS STR. NEAR ROYAL ROAD
01AK006	5.70	.103	FP3	----------	MID.BR. NASHWAAKSIS STR. AT SANDWITH'S FARM
01AK007	240	5.29	FP3	----------	NACKAWIC RIVER NEAR TEMPERANCE VALE
01AK008	531	11.3	FP3	----------	EEL RIVER NEAR SCOTT SIDING
01AL002	1450	36.2	FP3	----------	NASHWAAK R. AT DURHAM BRIDGE
01AL003	6.48	.196	F1	----------	HAYDEN BROOK NEAR NARROWS MOUNTAIN
01AL004	3.89	.114	F1	----------	NARROWS MOUNTAIN BROOK NEAR NARROWS MTN.
01AL008	641	17.1	P2	-----	NASHWAAK RIVER AT STANLEY

(1) SEE TABLE 2.1 EXPLANATION OF CODE
(2) INDICATES THE YEARS DURING WHICH THE STATION HAS OPERATED BETWEEN 1960 AND 1986
A '<' INDICATES DATA ARE ALSO AVAILABLE PRIOR TO 1960

...CONTINUED

TABLE 3.3 (CONTINUED)

ACTIVE NATURAL FLOW STATIONS IN NEW BRUNSWICK

STATION NUMBER	DRAINAGE AREA (km^2)	MEAN ANNUAL FLOW (m^3/s)	RESP. CLASS (1)	PERIOD OF RECORD (2) 60 65 70 75 80 86	STATION NAME
01AM001	557	12.4	FP3	----------	NORTH BRANCH OROMOCTO R. AT TRACEY
01AN001	34.4	.965	FP3	----------	CASTAWAY STREAM NEAR CASTAWAY
01AN002	1050	24.6	FP3	----------	SALMON RIVER AT CASTAWAY
01AO009	93.2	2.58	FP3	----------	BURPEE MILLSTREAM NEAR FERNMOUNT
01AP002	668	13.5	FP3	<----------	CANAAN RIVER AT EAST CANAAN
01AP004	1100	26.0	FP3	----------	KENNEBECASIS RIVER AT APOHAQUI
01AP006	293	7.18	FP3	----------	NEREPIS RIVER NEAR FOWLERS CORNER
01AQ001	239	7.46	F4	<----------	LEPREAU RIVER AT LEPREAU
01AQ008	197	n/a	FP3	-----	PISKAHEGAN STREAM NEAR PLEASANT MOUNTAIN
01AR006	115	2.93	F4	----------	DENNIS STREAM NEAR ST. STEPHEN
01AR012	-	.229	FP2	----------	CHAMCOOK STR. AT LITTLE CHAMCOOK L. OUTLET
01BC001	3160	67.6	F2	----------	RESTIGOUCHE R. BELOW KEDGWICK RIVER
01BE001	2270	41.7	F4	<----------	UPSALQUITCH RIVER AT UPSALQUITCH
01BJ001	363	7.88	F4	<----------	TETAGOUCHE RIVER NEAR WEST BATHURST
01BJ003	510	10.9	F4	----------	JACQUET RIVER NEAR DURHAM CENTRE
01BJ007	7740	171	F4	----------	RESTIGOUCHE R. ABOVE RAFTING GROUND BK.
01BJ010	190	4.19	P2	------	MIDDLE RIVER NEAR BATHURST
01BJ011	123	2.85	P2	------	NIGADOO RIVER NEAR ALCIDA
01BJ012	43.2	1.07	FP3	----	EEL RIVER NEAR DUNDEE

(1) SEE TABLE 2.1 EXPLANATION OF CODE
(2) INDICATES THE YEARS DURING WHICH THE STATION HAS OPERATED BETWEEN 1960 AND 1986
A '<' INDICATES DATA ARE ALSO AVAILABLE PRIOR TO 1960
'-' INDICATES THAT THE DRAINAGE AREA IS VARIABLE AND/OR INDETERMINABLE

...CONTINUED

TABLE 3.3 (CONCLUDED)

ACTIVE NATURAL FLOW STATIONS IN NEW BRUNSWICK

STATION NUMBER	DRAINAGE AREA (km^2)	MEAN ANNUAL FLOW (m^3/s)	RESP. CLASS (1)	PERIOD OF RECORD (2) 60 65 70 75 80 86	STATION NAME
01BK006	13.0	.331	FP3	------	FORTY MILE BK. (W. BCH.)AT CARIBOU DEPOT
01BL001	175	3.31	F4	----------	BASS RIVER AT BASS RIVER
01BL002	173	3.95	F4	----------	RIVIERE CARAQUET AT BURNSVILLE
01BL003	383	8.93	F4	----------	BIG TRACADIE R. AT MURCHY BRIDGE CROSSING
01BO001	5050	118	F4	< ----------	SW MIRAMICHI RIVER AT BLACKVILLE
01BO002	611	15.2	FP3	----------	RENOUS RIVER AT MCGRAW BROOK
01BO003	484	10.6	FP3	----------	BARNABY RIVER BELOW SEMIWAGAN RIVER
01BO004	316	8.87	FP3	---------	BARTIBOG RIVER BELOW HWY NO. 8
01BP001	1340	33.3	FP3	<----------	LITTLE SW MIRAMICHI R. AT LYTTLETON
01BQ001	948	22.0	FP3	----------	NW MIRAMICHI RIVER AT TROUT BROOK
01BR001	177	3.97	F4	< ----------	KOUCHIBOUGUAC RIVER NEAR VAUTOUR
01BS001	166	3.84	F4	----------	COAL BRANCH RIVER AT BEERSVILLE
01BT001	32.1	.576	FP3	--	KINNEAR RIVER NEAR HAUTE-ABOUJAGANE
01BU002	391	8.31	F4	----------	PETITCODIAC RIVER NEAR SALISBURY
01BU003	129	3.74	P2	----------	TURTLE CREEK AT TURLE CREEK
01BV006	130	5.45	F1	----------	POINT WOLFE RIVER AT FUNDY NATIONAL PARK

(1) SEE TABLE 2.1 EXPLANATION OF CODE
(2) INDICATES THE YEARS DURING WHICH THE STATION HAS OPERATED BETWEEN 1960 AND 1986
A '<' INDICATES DATA ARE ALSO AVAILABLE PRIOR TO 1960

DRAINAGE INDEX SUB-SUB-DIVISIONS IN NEW BRUNSWICK

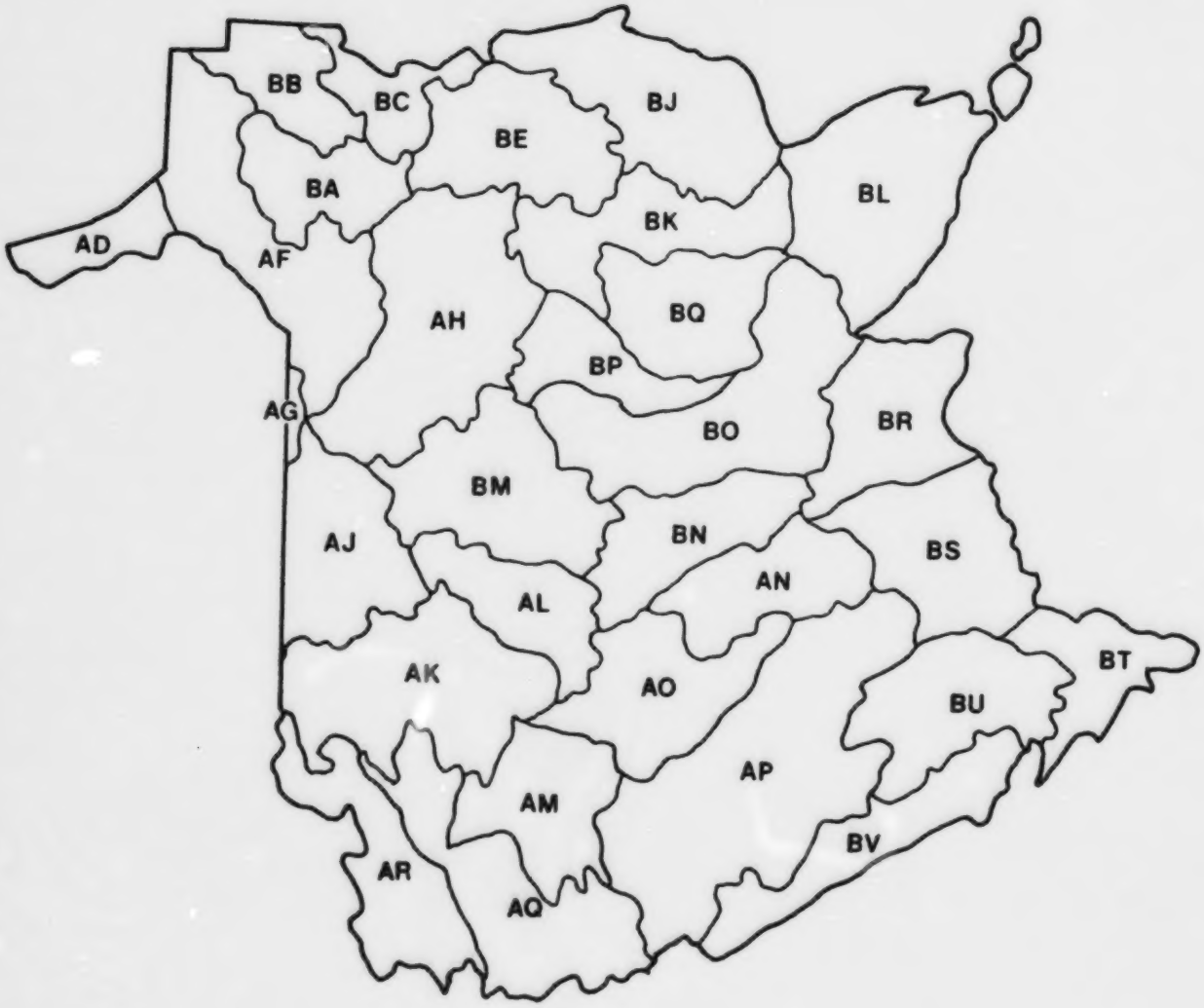

FIGURE 3.1

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AD

INDEX STATION NUMBER	002	003	004
PERIOD OF RECORD	26-86	51-86	68-86
DRAINAGE AREA (km2)	14700	1350	15500
FINANCIAL RESPONS. CLASS.	F3	F3	F3
NATURAL OR REGULATED	N	N	N
DISCHARGE OR WATER LEVEL	Q	Q	Q
MEAN ANNUAL RUNOFF (mm)	593	594	665

PLATE 1

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AF

INDEX STATION NUMBER	002	003	007
PERIOD OF RECORD	30-86	62-86	77-86
DRAINAGE AREA (km2)	21900	1150	339
FINANCIAL RESPONS. CLASS.	F3	F2	FP3
NATURAL OR REGULATED	R	R	R
DISCHARGE OR WATER LEVEL	Q	Q	Q
MEAN ANNUAL RUNOFF (mm)	598	321	687

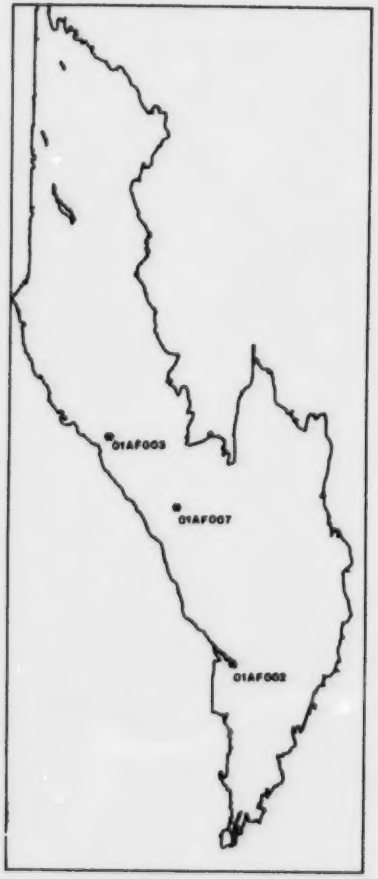

PLATE 2

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AG

INDEX STATION NUMBER	002	003
PERIOD OF RECORD	67-86	75-86
DRAINAGE AREA (km2)	199	6060
FINANCIAL RESPONS. CLASS.	F3	F3
NATURAL OR REGULATED	N	R
DISCHARGE OR WATER LEVEL	Q	Q
MEAN ANNUAL RUNOFF (mm)	593	620

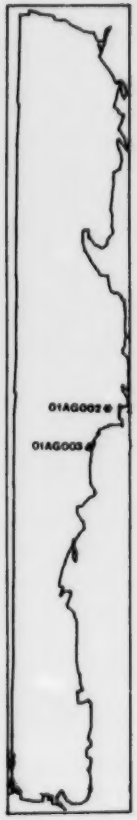

PLATE 3

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AH

INDEX STATION NUMBER	002	003	004	005
PERIOD OF RECORD	54-86	54-86	53-86	72-86
DRAINAGE AREA (km2)	2230	3130	4330	230
FINANCIAL RESPONS. CLASS.	P2	P2	OTHER	FP3
NATURAL OR REGULATED	R	R	R	N
DISCHARGE OR WATER LEVEL	Q	Q	Q	Q
MEAN ANNUAL RUNOFF (mm)	664	661	624	591

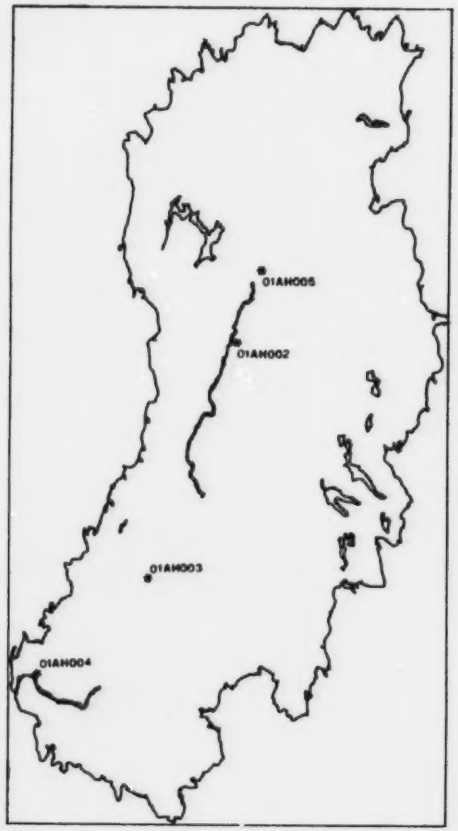

PLATE 4

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AJ

INDEX STATION NUMBER	001	003	004	008	009	010	011
PERIOD OF RECORD	51-86	68-86	67-86	73-86	74-79 80-86	73-86	73-86
DRAINAGE AREA (km2)	34200	1210	484	NA	35000 NA	350	156
FINANCIAL RESPONS. CLASS.	F4	F3	F3	FP2	F1	FP3	FP3
NATURAL OR REGULATED	R	N	R	R	R	N	N
DISCHARGE OR WATER LEVEL	Q	Q	Q	WL	Q WL	Q	Q
MEAN ANNUAL RUNOFF (mm)	611	670	645	NA	709 NA	686	654

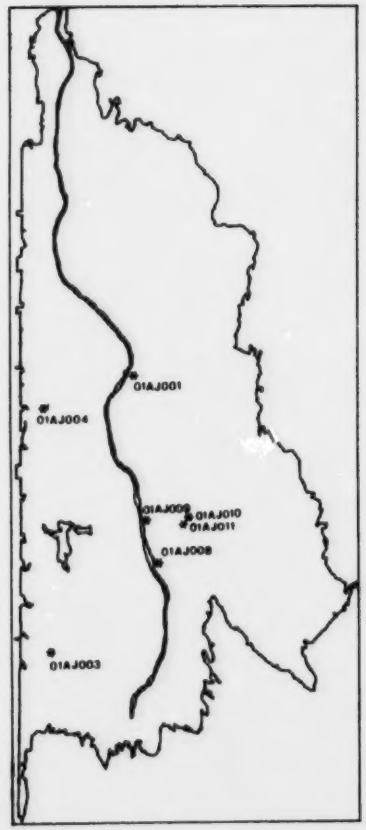

PLATE 5

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AK

INDEX STATION NUMBER	001	003	004	005	006	007	008	009
PERIOD OF RECORD	18-86	29-86	66-86	65-86	66-86	67-86	74-86	80-86
DRAINAGE AREA (km2)	234	NA	39900	26.9	5.70	240	531	NA
FINANCIAL RESPONS. CLASS.	FP3	F4	F4	FP3	FP3	FP3	FP3	P2
NATURAL OR REGULATED	N	R	R	N	N	N	N	R
DISCHARGE OR WATER LEVEL	Q	WL	Q	Q	Q	Q	Q	WL
MEAN ANNUAL RUNOFF (mm)	675	NA	657	639	549	671	635	NA

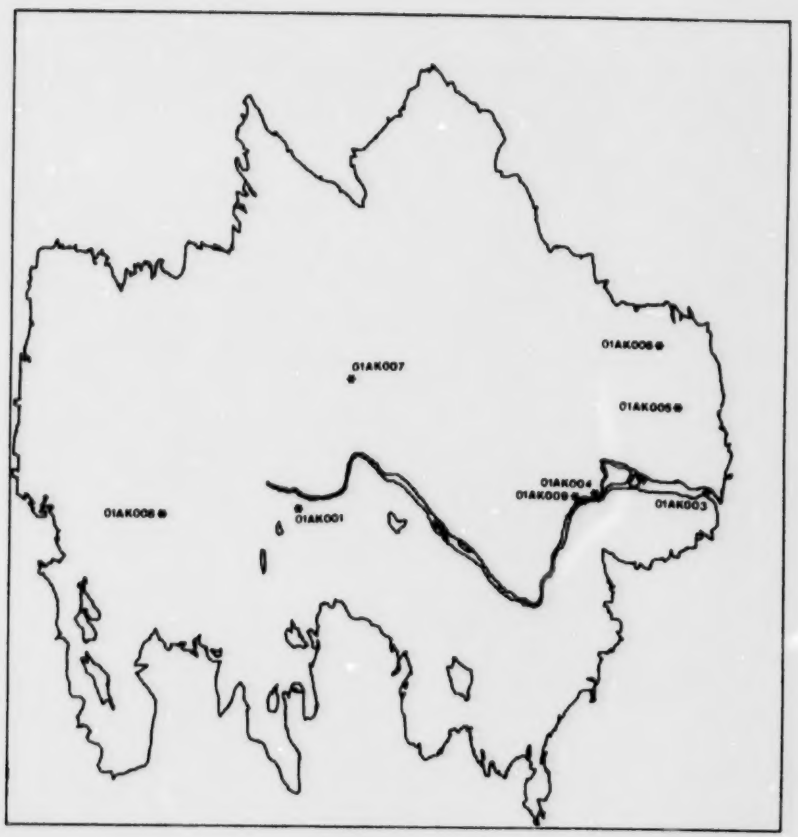

PLATE 6

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AL

INDEX STATION NUMBER	002	003	004	008
PERIOD OF RECORD	62-86	70-86	72-86	82-86
DRAINAGE AREA (km2)	1450	6.48	3.89	641
FINANCIAL RESPONS. CLASS.	FP3	F1	F1	P2
NATURAL OR REGULATED	N	N	N	N
DISCHARGE OR WATER LEVEL	Q	Q	Q	Q
MEAN ANNUAL RUNOFF (mm)	772	910	884	749

PLATE 7

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AM

INDEX STATION NUMBER	001
PERIOD OF RECORD	62-86
DRAINAGE AREA (km2)	557
FINANCIAL RESPONS. CLASS.	FP3
NATURAL OR REGULATED	N
DISCHARGE OR WATER LEVEL	Q
MEAN ANNUAL RUNOFF (mm)	684

PLATE 8

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AN

INDEX STATION NUMBER	001	002
PERIOD OF RECORD	72-86	74-86
DRAINAGE AREA (km2)	34.4	1050
FINANCIAL RESPONS. CLASS.	FP3	FP3
NATURAL OR REGULATED	N	N
DISCHARGE OR WATER LEVEL	Q	Q
MEAN ANNUAL RUNOFF (mm)	840	710

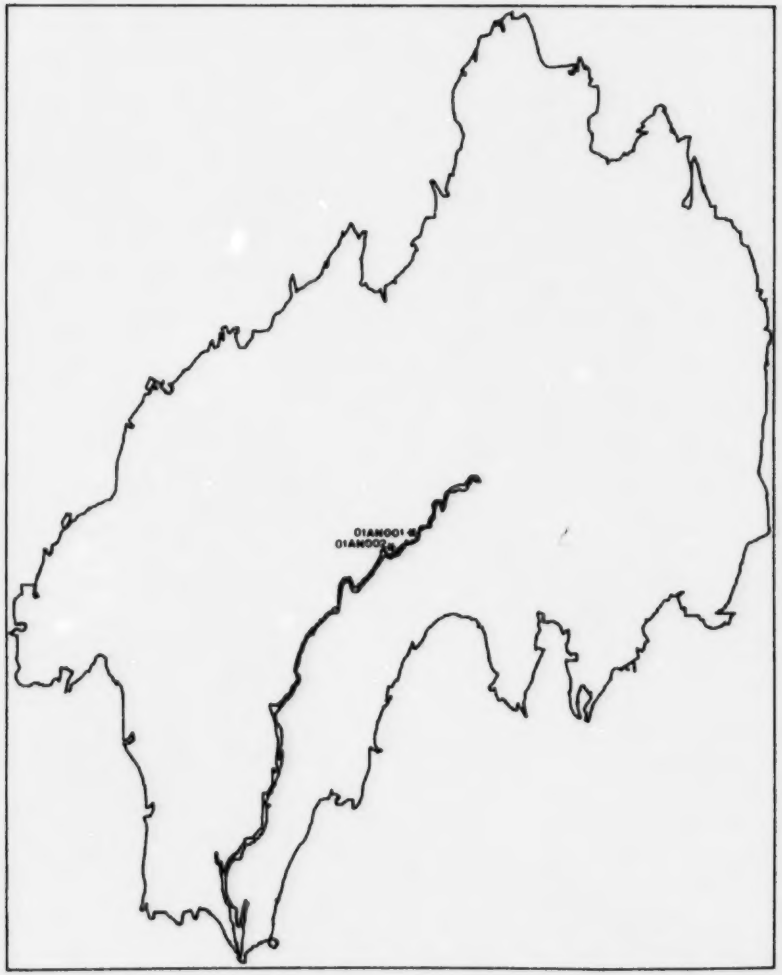

PLATE 9

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AO

INDEX STATION NUMBER	002	003	004	009	010
PERIOD OF RECORD	65-86	65-86	66-86	76-86	80-86
DRAINAGE AREA (km2)	NA	NA	NA	93.2	NA
FINANCIAL RESPONS. CLASS.	P2	P2	F1	FP3	P2
NATURAL OR REGULATED	R	R	R	N	R
DISCHARGE OR WATER LEVEL	WL	WL	WL	Q	WL
MEAN ANNUAL RUNOFF (mm)	NA	NA	NA	823	NA

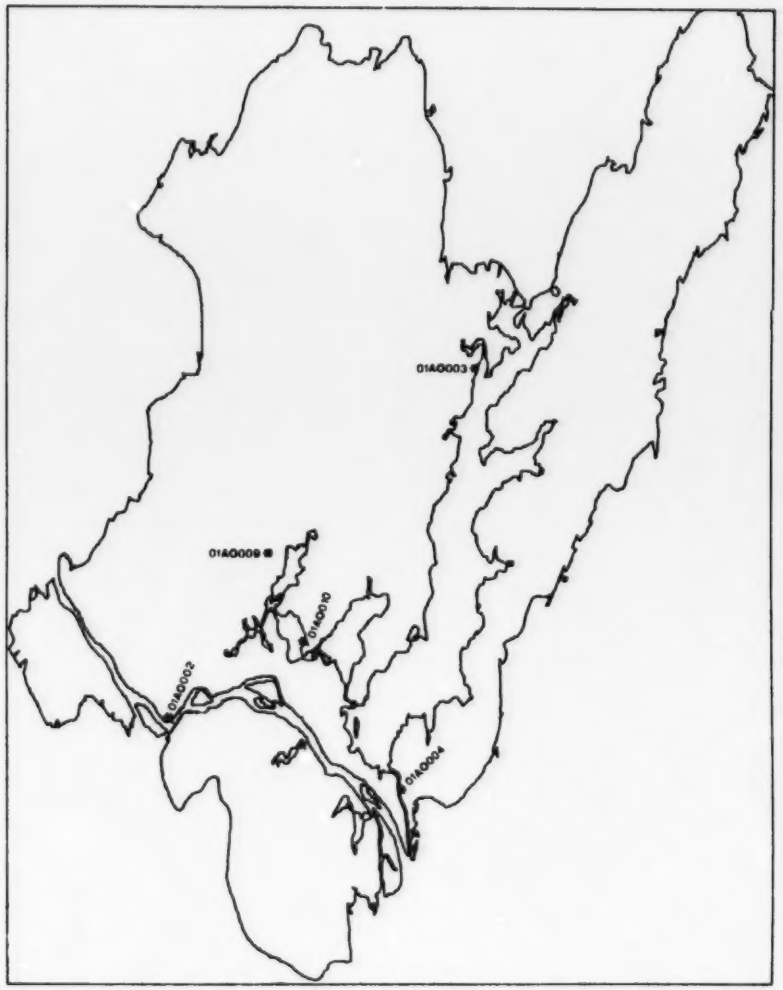

PLATE 10

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AP

INDEX STATION NUMBER	002	003	004	005	006
PERIOD OF RECORD	25-86	23-86	61-86	67-86	76-86
DRAINAGE AREA (km2)	668	NA	1100	NA	293
FINANCIAL RESPONS. CLASS.	FP3	F1	FP3	F1	FP3
NATURAL OR REGULATED	N	R	N	R	N
DISCHARGE OR WATER LEVEL	Q	WL	Q	WL	Q
MEAN ANNUAL RUNOFF (mm)	626	NA	729	NA	727

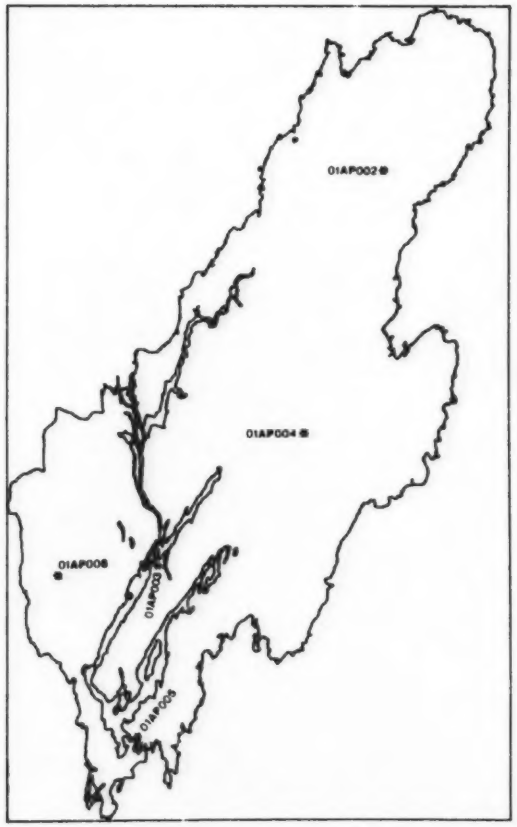

PLATE 11

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AQ

INDEX STATION NUMBER	001	002	007	008	009
PERIOD OF RECORD	16-86	17-86	79-86	83-86	85-86
DRAINAGE AREA (km2)	239	1420	NA	197	NA
FINANCIAL RESPONS. CLASS.	F4	F4	P2	FP3	P2
NATURAL OR REGULATED	N	R	R	N	R
DISCHARGE OR WATER LEVEL	Q	Q	WL	Q	WL
MEAN ANNUAL RUNOFF (mm)	975	754	NA	675	NA

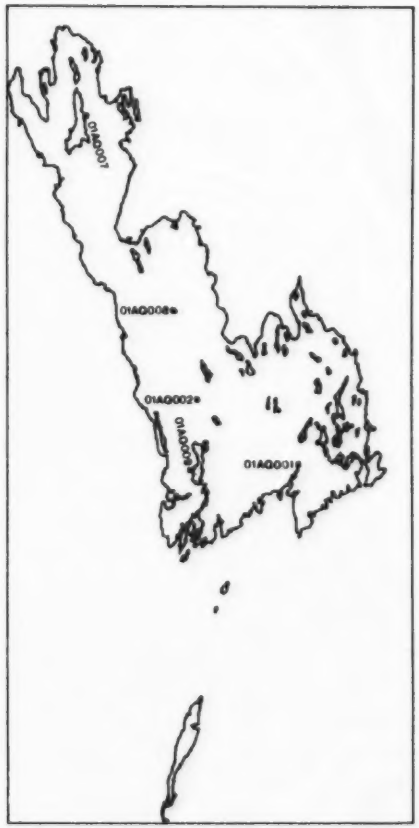

PLATE 12

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01AR

INDEX STATION NUMBER	004	005	006	009	010	011	012	013
PERIOD OF RECORD	28-86	59-86	66-86	69-86	67-86	68-86	68-86	80-86
DRAINAGE AREA (km2)	1080	3550	115	NA	NA	357	NA	NA
FINANCIAL RESPONS. CLASS.	F3	F3	F4	F3	F3	F3	FP2	F3
NATURAL OR REGULATED	R	R	N	R	R	R	N	R
DISCHARGE OR WATER LEVEL	Q	Q	Q	WL	WL	Q	Q	WL
MEAN ANNUAL RUNOFF (mm)	601	690	778	NA	NA	591	NA	NA

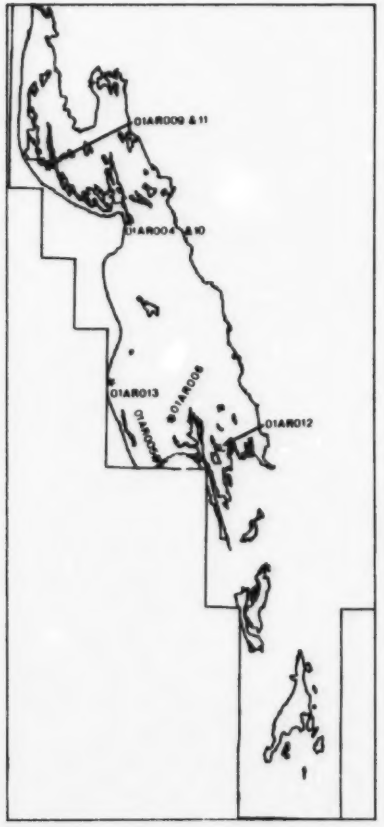

PLATE 13

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BC

INDEX STATION NUMBER	001
PERIOD OF RECORD	62-86
DRAINAGE AREA (km2)	3160
FINANCIAL RESPONS. CLASS.	P2
NATURAL OR REGULATED	N
DISCHARGE OR WATER LEVEL	Q
MEAN ANNUAL RUNOFF (mm)	668

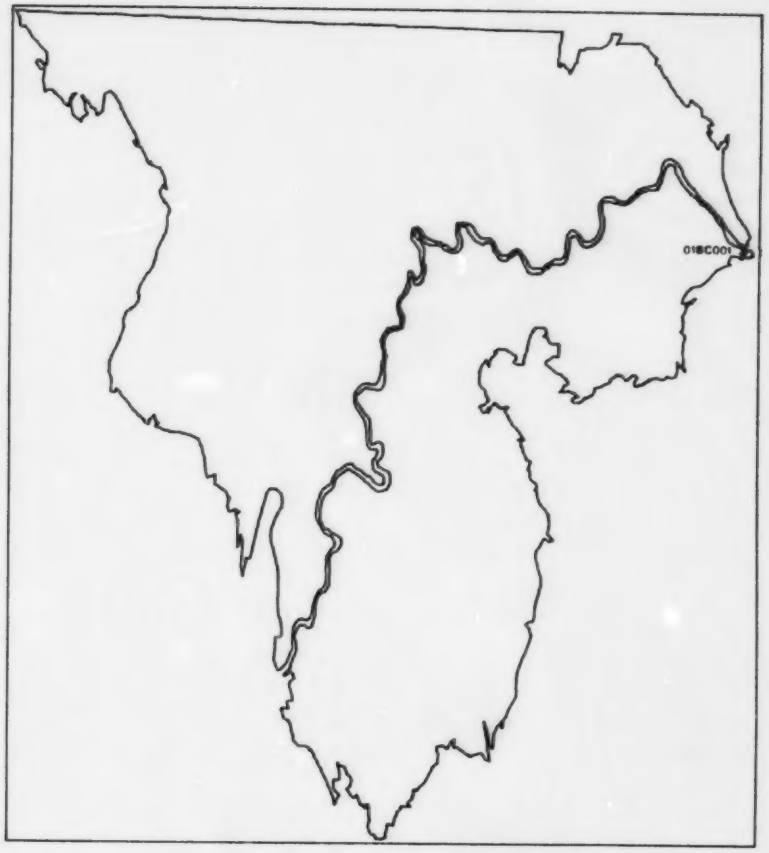

PLATE 14

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BE

INDEX STATION NUMBER	001
PERIOD OF RECORD	18-86
DRAINAGE AREA (km2)	2270
FINANCIAL RESPONS. CLASS.	F4
NATURAL OR REGULATED	N
DISCHARGE OR WATER LEVEL	Q
MEAN ANNUAL RUNOFF (mm)	573

PLATE 15

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BJ

INDEX STATION NUMBER	001	003	007	009	010	011	012
PERIOD OF RECORD	22-86	64-86	68-86	80-86	81-86	81-86	84-86
DRAINAGE AREA (km2)	363	510	7740	60.8	190	123	43.2
FINANCIAL RESPONS. CLASS.	F4	F4	F4	F2	P2	P2	FP3
NATURAL OR REGULATED	N	N	N	R	N	N	N
DISCHARGE OR WATER LEVEL	Q	Q	Q	Q	Q	Q	Q
MEAN ANNUAL RUNOFF (mm)	675	459	683	599	611	650	611

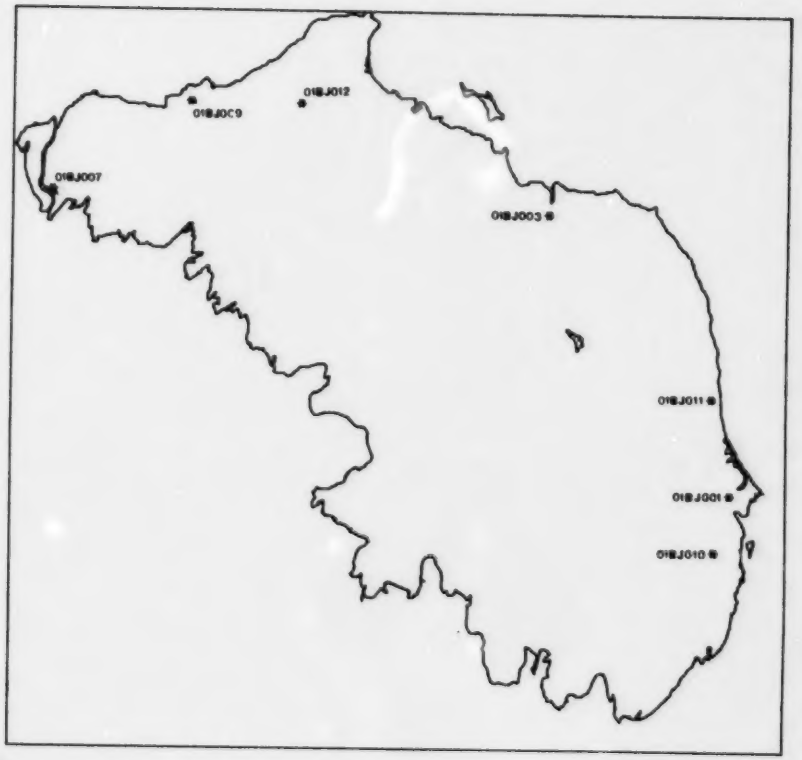

PLATE 16

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BK

INDEX STATION NUMBER	003	006
PERIOD OF RECORD	21-86	81-86
DRAINAGE AREA (km2)	1840	13.0
FINANCIAL RESPONS. CLASS.	OTHER	FP3
NATURAL OR REGULATED	R	N
DISCHARGE OR WATER LEVEL	Q	Q
MEAN ANNUAL RUNOFF (mm)	614	635

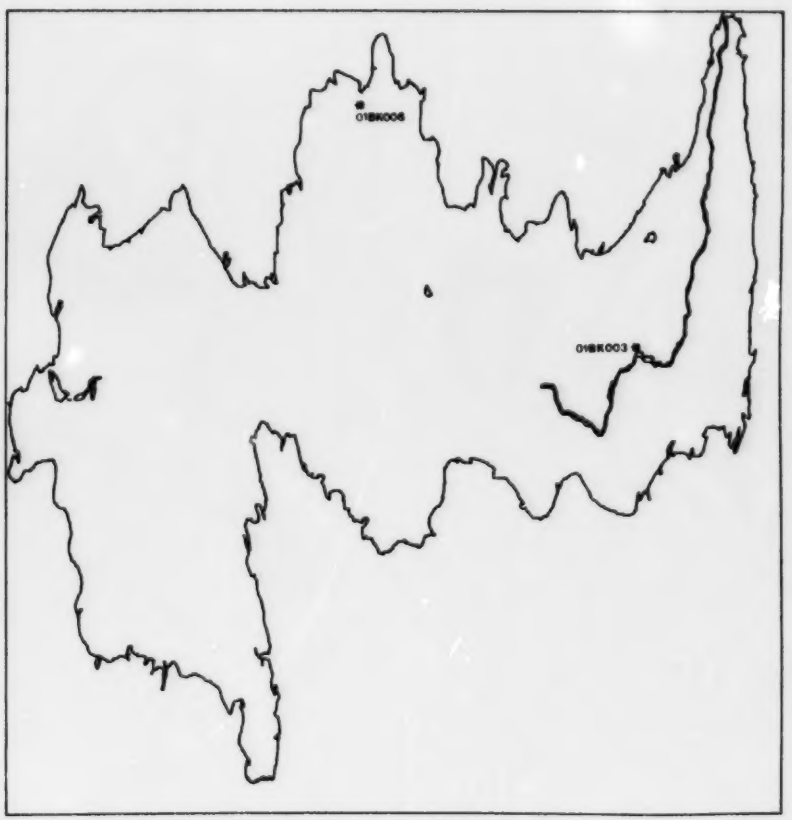

PLATE 17

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BL

INDEX STATION NUMBER	001	002	003
PERIOD OF RECORD	65-86	69-86	70-86
DRAINAGE AREA (km2)	175	173	383
FINANCIAL RESPONS. CLASS.	F4	F4	F4
NATURAL OR REGULATED	N	N	N
DISCHARGE OR WATER LEVEL	Q	Q	Q
MEAN ANNUAL RUNOFF (mm)	577	688	700

PLATE 18

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BO

INDEX STATION NUMBER	001	002	003	004
PERIOD OF RECORD	18-86	65-86	73-86	78-86
DRAINAGE AREA (km2)	5050	611	484	316
FINANCIAL RESPONS. CLASS.	F4	FP3	FP3	FP3
NATURAL OR REGULATED	N	N	N	N
DISCHARGE OR WATER LEVEL	Q	Q	Q	Q
MEAN ANNUAL RUNOFF (mm)	729	764	651	785

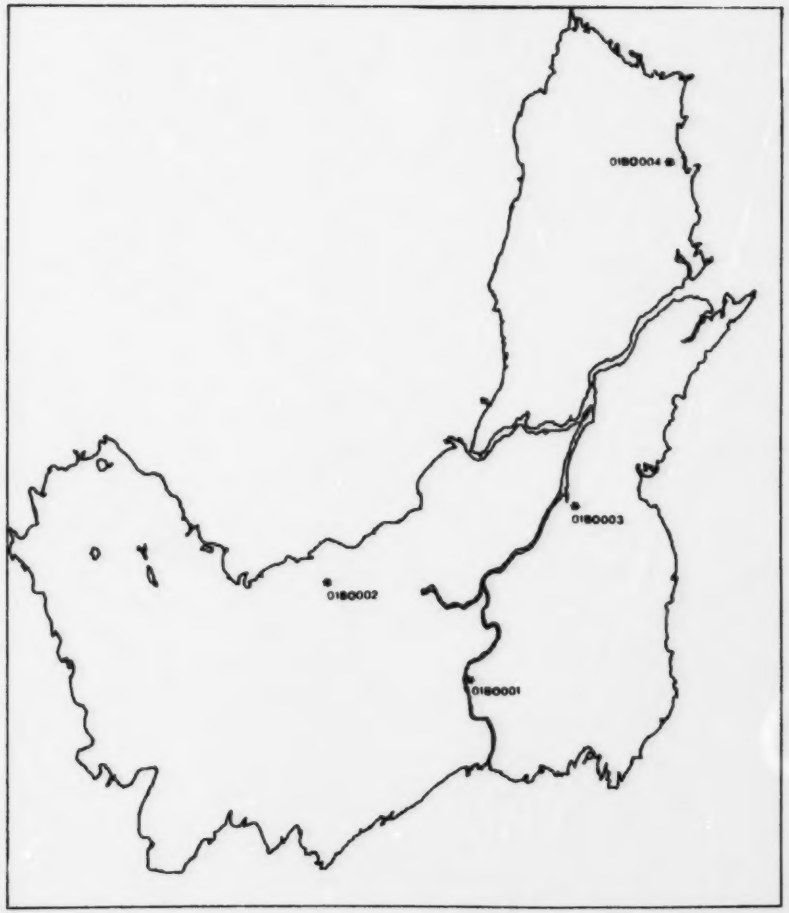

PLATE 19

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BP

INDEX STATION NUMBER	001
PERIOD OF RECORD	51-86
DRAINAGE AREA (km2)	1340
FINANCIAL RESPONS. CLASS.	FP3
NATURAL OR REGULATED	N
DISCHARGE OR WATER LEVEL	Q
MEAN ANNUAL RUNOFF (mm)	769

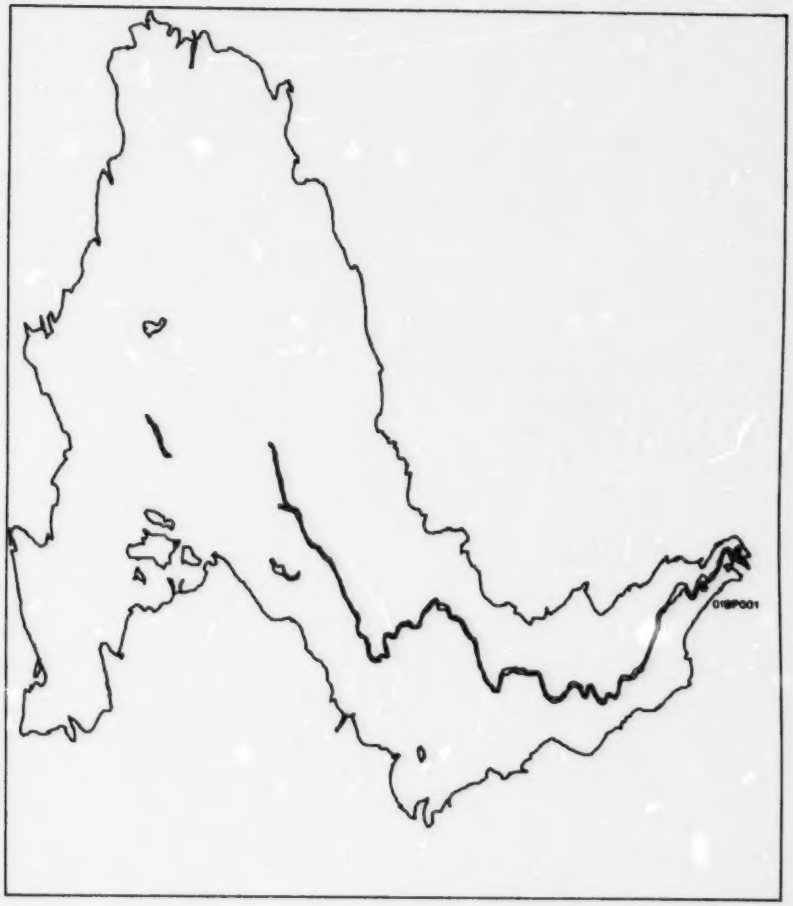

PLATE 20

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BQ

INDEX STATION NUMBER	001	003
PERIOD OF RECORD	61-86	69-86
DRAINAGE AREA (km2)	948	NA
FINANCIAL RESPONS. CLASS.	FP3	F1
NATURAL OR REGULATED	N	R
DISCHARGE OR WATER LEVEL	Q	Q
MEAN ANNUAL RUNOFF (mm)	713	NA

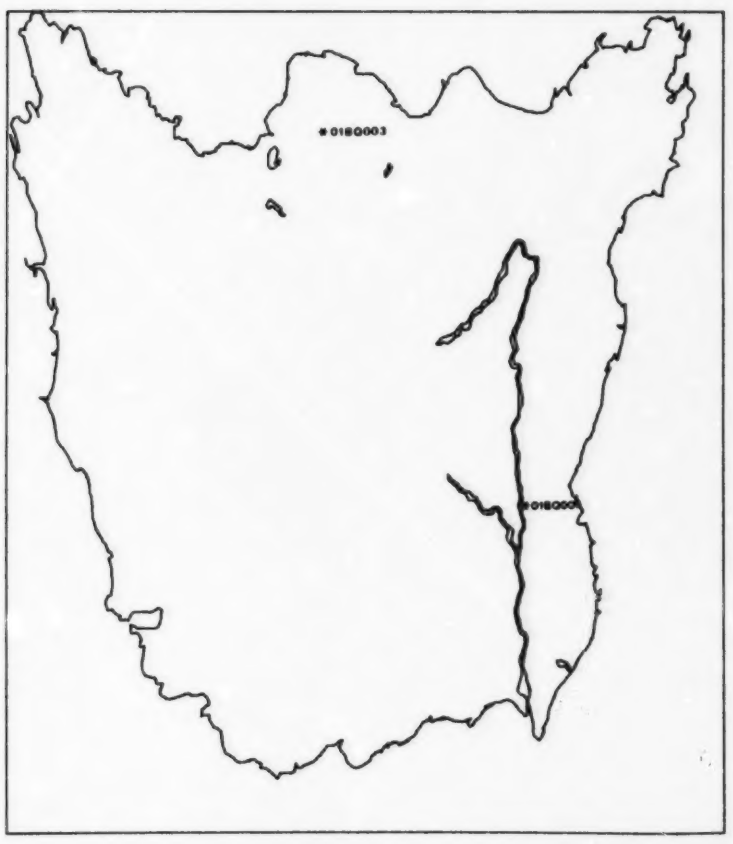

PLATE 21

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BR

INDEX STATION NUMBER	001
PERIOD OF RECORD	69-86
DRAINAGE AREA (km2)	177
FINANCIAL RESPONS. CLASS.	F4
NATURAL OR REGULATED	N
DISCHARGE OR WATER LEVEL	Q
MEAN ANNUAL RUNOFF (mm)	684

PLATE 22

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BS

INDEX STATION NUMBER	001
PERIOD OF RECORD	64-86
DRAINAGE AREA (km2)	166
FINANCIAL RESPONS. CLASS.	F4
NATURAL OR REGULATED	N
DISCHARGE OR WATER LEVEL	Q
MEAN ANNUAL RUNOFF (mm)	711

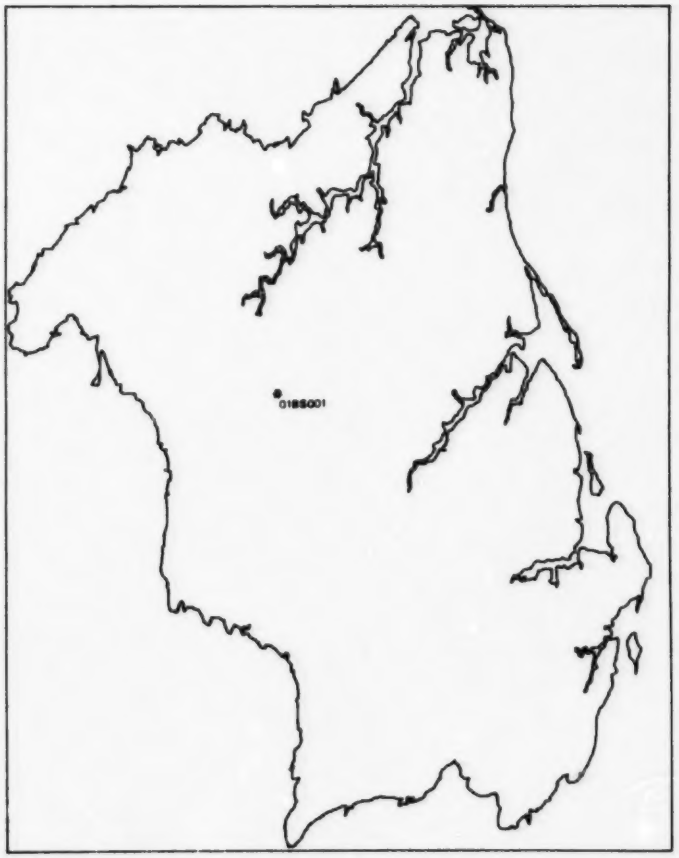

PLATE 23

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BT

INDEX STATION NUMBER	001
PERIOD OF RECORD	85-86
DRAINAGE AREA (km2)	32.1
FINANCIAL RESPONS. CLASS.	FP3
NATURAL OR REGULATED	N
DISCHARGE OR WATER LEVEL	Q
MEAN ANNUAL RUNOFF (mm)	567

PLATE 24

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BU

INDEX STATION NUMBER	002	003
PERIOD OF RECORD	61-86	62-86
DRAINAGE AREA (km2)	391	129
FINANCIAL RESPONS. CLASS.	F4	P2
NATURAL OR REGULATED	N	N
DISCHARGE OR WATER LEVEL	Q	Q
MEAN ANNUAL RUNOFF (mm)	652	891

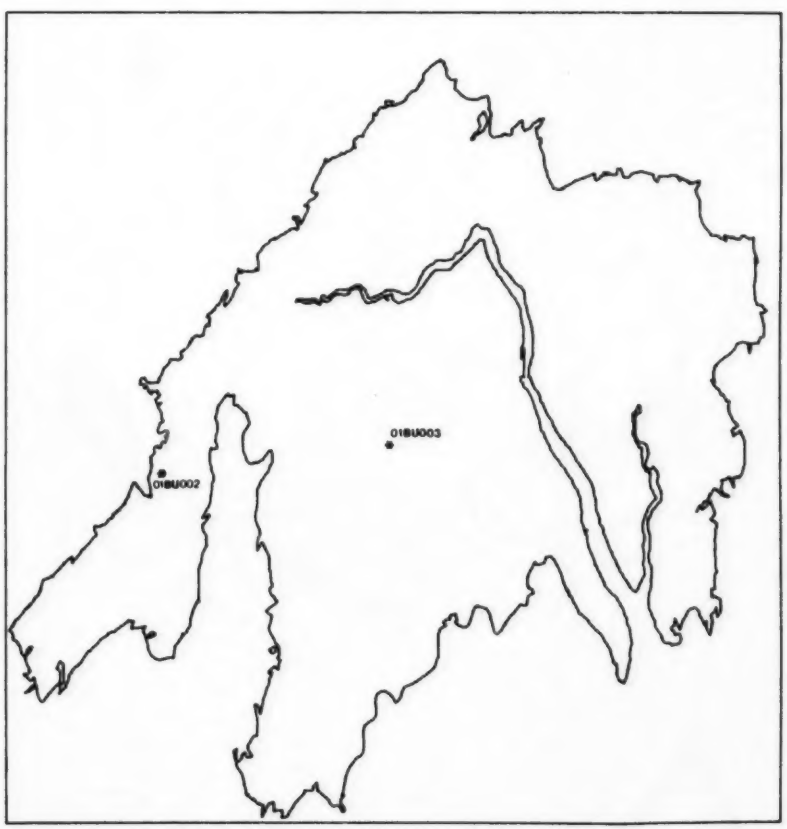

PLATE 25

NEW BRUNSWICK HYDROMETRIC NETWORK EVALUATION

ACTIVE HYDROMETRIC STATIONS
DRAINAGE INDEX 01BV

INDEX STATION NUMBER	006
PERIOD OF RECORD	64-86
DRAINAGE AREA (km2)	130
FINANCIAL RESPONS. CLASS.	F1
NATURAL OR REGULATED	N
DISCHARGE OR WATER LEVEL	Q
MEAN ANNUAL RUNOFF (mm)	1277

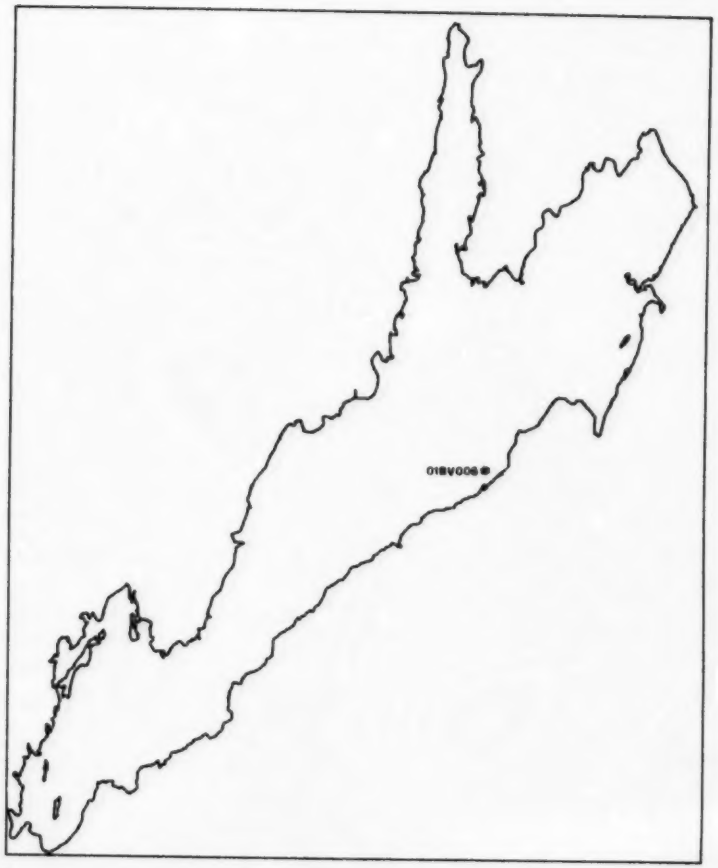

PLATE 26